Kentucky Method 64-434-~~03~~04
Revised ~~1/14/03~~3/5/04
Supersedes 64-434-~~00~~03
Dated ~~6/8/00~~1/14/03

DETERMINATION OF MOISTURE CONTENT IN ASPHALT MIXTURES (RAPID FIELD TEST)

1. SCOPE:

   1.1. This method is a rapid field test for measuring the percent of moisture present in an asphalt mixture.

   1.2. Use the results of this test to correct the asphalt binder content (AC) as determined by Kentucky Method (KM) 64-405, *Extraction of Binder From Asphalt Paving Mixtures*; KM 64-436, *Asphalt Binder Content Determination of Asphalt Mixtures by Plant Recordation*; KM 64-437, *Determination of Asphalt Binder Content of Asphalt Mixtures Using the Nuclear Asphalt Content Gauge*; KM 64-438, *Asphalt Binder Content Determination of Asphalt Mixtures Based on the Maximum Specific Gravity*; or AASHTO T 308, *Determining the Asphalt Content of Hot Mix Asphalt (HMA) by the Ignition Method.*

2. APPARATUS:

   2.1. Balance or Scale: Provide a device capable of accurately weighing 5000 g, sensitive to 0.1 g.

   2.2. Hot Plate or Oven: Provide a unit capable of heating an asphalt mixture to 230 ± 9 °F.

   2.3. Miscellaneous Equipment: Provide insulated gloves and flat-bottom, metal, drying pans.

3. SAMPLE: Refer to KM 64-425, *Sampling Asphalt Mixtures*, for the sampling procedure and test-portion size.

   NOTE 1: Do not use the test portion from a moisture content determination for any method of AC determination due to possible migration and absorption of asphalt binder.

4. PROCEDURE:

   4.1. Weigh the drying pan to the nearest 0.1 g, and record the weight of the pan.

   4.2. Place the sample in the pan, and weigh it to the nearest 0.1 g. Record this weight as the "pan and sample" weight.

   4.3. Place the pan and sample on the hot plate or in the oven.

   4.4. Dry the sample to a constant mass at 230 ± 9 °F, and record the weight.

NOTE 2: Consider "constant mass" to be the point when additional drying does not alter the moisture content by more than 0.1 percent when evaluated at 15-minute intervals.

5. CALCULATIONS AND REPORT:

5.1. Calculate the moisture content as follows:

$$\textit{Moisture content}\,(\%) = 100\left(\frac{A-B}{A}\right),$$

where:

A = Weight of the sample before drying minus the weight of the pan; and
B = Weight of the sample after drying minus the weight of the pan.

5.2. Report the moisture content to the nearest 0.1 percent on the appropriate Asphalt Mixture Acceptance Workbook (AMAW).

APPROVED _____
Director
DIVISION OF MATERIALS

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